



How to make better

Thirty-five cents

Polacolor Pictures

with
roll film
cameras



Before you start

This booklet is for all Polaroid Land roll film camera owners.

For those who have never used Polaroid Land color film it will show what can be done with their cameras, explain what they must do to get started making color pictures, and serve as a handy guide to successful color photography when they do try their first roll.

For those who have tried Polacolor film and been delighted with the results, it shows new ways to expand their picture taking pleasure, and presents ideas for better pictures.

And for those whose first experience with Polacolor film was for some reason disappointing, we hope it will provide information to explain why they were unsuccessful and give them enough help and guidance to make their next attempt a happy one.

For months we've been looking at large numbers of Polacolor prints made by owners of all kinds of Polaroid cameras in all sorts of situations.

Many of them were beautiful; we were delighted to see them.

Others were well exposed and sharply focused but dull. Perhaps they lacked color in the subjects themselves. (You can't make a colorful picture of a scene

that is essentially colorless.) Or, the subjects were too far away; or hard to see because of bad backgrounds; or they were just badly planned, etc.

Other pictures had flaws of a technical nature indicating that the photographer had had difficulties in loading the film, pulling the tab, or timing the development.

This booklet is based on our study of those pictures and our conclusions about what made some of them excellent, some so-so, and some awful.

From all this, one recommendation (or rule if you want to call it that) stands out above everything: *Plan and think before you shoot!*

Don't just snap away carelessly. We want you to get six satisfying pictures from each roll. But unless you plan each picture and think about what you're going to do you'll waste your film.

To help you get better Polacolor pictures this booklet presents two kinds of information. There are clear, simple "how to" instructions for using every model Polaroid Land roll film camera except the Models 80, 80A, 80B (separate "how to" instructions for those cameras will be supplied as they are factory converted to use color film).

And, just as important, there are many pages showing picture situations which you can copy, or use as inspirations for your own picture ideas. Anyone can duplicate them with a Polaroid Land roll film camera. They show you what makes one picture a knockout while another is just dull.

All of the color illustrations in this book were engraved directly from the original Polacolor prints. We're particularly proud of the quality of the enlargements. The picture opposite, for example, is about the same size as the 8x10 enlargements made by the Polaroid Copy Service. No reproduction of the pictures (not even the excellent engraving and printing by R. R. Donnelley and Sons Co.) can do full justice to the qualities of the original prints. They must be seen to be appreciated fully.

There's lots of color at this time of year—both indoors and outside. Your Land camera and Polacolor film can capture it for you if you use them carefully. We hope that this booklet will help you and contribute to your enjoyment of 50-second color photography. If it does, perhaps you'll take a moment to let us know which part of it was most useful. Now, let's begin.

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YOU CAN MAKE PICTURES LIKE THESE:

Take a look at how beautiful Polacolor pictures can be. These are all simple subjects. Although some were easy to snap, others required considerable skill. In a few, the photographers saw and captured fleeting, exciting moments. Others were carefully planned—posed, in fact. Each is the result of sharp seeing, correct exposure, and the few movements needed to make a Polacolor picture. On the following pages we will show you how you can do the same, with your camera.



Must items: For color, some cameras must be factory converted; others need accessories.

Most Polaroid Land roll film cameras can make excellent Polacolor pictures just as they are. However, some models require simple, inexpensive accessories for shooting color, and some older models must be modified by Polaroid Corporation before they can be used with color film.

MODELS J66 AND J33:

In order to use Polacolor film in these cameras you must install three simple accessories. They come in a special Color Adapter Kit costing \$4.50, available from your dealer or Customer Service, Polaroid Corporation, Cambridge, Mass. 02139. The #660 kit is for the J66; #330 is for the J33. Instructions come with the kit, but here's a brief description of the items.

The Electric Eye Adapter #566 (#533 for the J33) clips over the elec-

tronic eye and the lighten/darken (L/D) control. It adapts the electric eye for use with color film. Also, a flash exposure guide is printed on it. For the J66 there are three different types of adapters which are identified by yellow, blue, or green dots. The color dot on the adapter must match the color dot on the L/D control ring of your camera. All three adapters are included in the kit; you discard the two you don't need. For the J33 there are two adapters with blue or yellow dots. You install the one

that matches the dot on your camera's L/D control ring and discard the other. The J-5 Flash Reflector fits right onto the built-in flashgun of both J66 and J33 cameras. It uses the M-3 (clear) bulbs needed with Polacolor film. The Ultra-Violet Filter #567 (#534 for the J33) is made of thin, clear plastic and improves the color quality and sharpness of your pictures. You attach it permanently inside your camera (anyone can do it in a jiffy) before loading your first roll of color film.

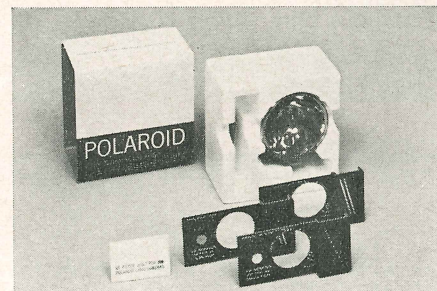
will be able to make Polacolor prints of excellent quality.

Don't try to use Polacolor film in the cameras listed below without the accessories or modifications. You will only waste film and be disappointed.

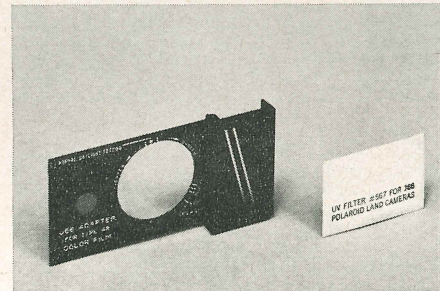
that matches the dot on your camera's L/D control ring and discard the other.

The J-5 Flash Reflector fits right onto the built-in flashgun of both J66 and J33 cameras. It uses the M-3 (clear) bulbs needed with Polacolor film.

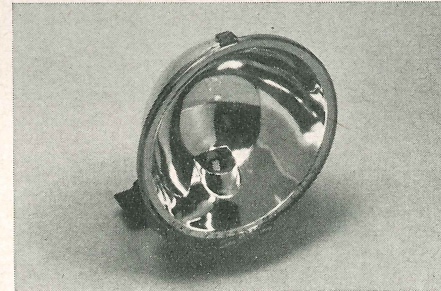
The Ultra-Violet Filter #567 (#534 for the J33) is made of thin, clear plastic and improves the color quality and sharpness of your pictures. You attach it permanently inside your camera (anyone can do it in a jiffy) before loading your first roll of color film.



COLOR ADAPTER KIT



ELECTRIC EYE ADAPTER; FILTER

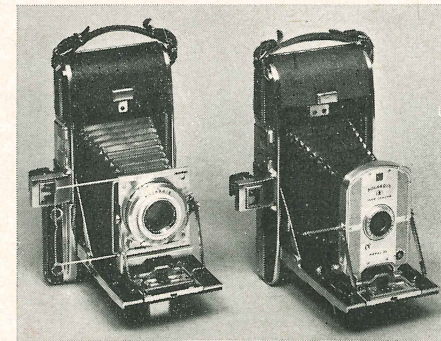


J-5 FLASH REFLECTOR

MODEL 110; ORIGINAL MODEL 95:

Look carefully at the nameplate on the front of your camera. If it's a Model 95 (not 95A or 95B, but just plain 95) or a Model 110 (not 110A or 110B, but plain 110) the back of the camera should be modified before you use Polacolor film. There is no charge for this.

Pack your camera carefully and ship it to your nearest authorized repair station (see list, page 29) or ask your dealer to handle the shipping for you. Enclose a note stating "Modify for color film" and be sure to include your full name and complete return address, clearly printed or typewritten.

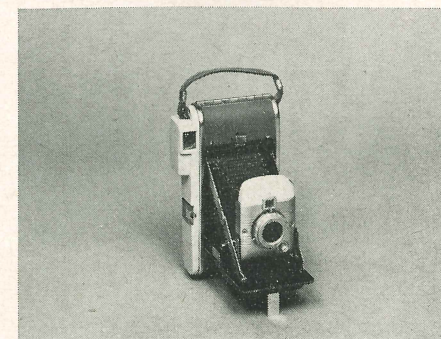


MODEL 80, 80A, 80B:

All of these cameras must be altered at the factory before attempting to use them with Polacolor film. The price for this modification is \$15.95. The work includes changes in the film transport and developer spreading mechanism; overhaul and/or speed check of the shutter; check and adjustment of the flash synchronization; installation of new bellows if necessary; cutting teeth into the edge of the cutter bar.

The work is not intended to make the camera "like new" but to put it in first-class operating condition. The modifications will also improve its performance with black-and-white film.

Conversion of these cameras is being done according to a close schedule. DON'T send yours straight off to be converted. Instead, ask your dealer for information about conversion, or write to Customer Service, Polaroid Corporation, Cambridge, Mass. 02139.



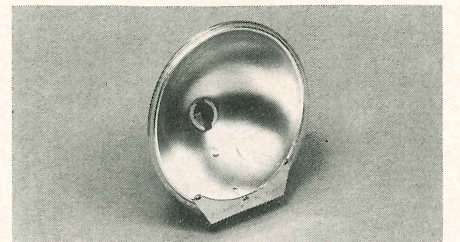
Helpful items: These accessories help you to get better color pictures more easily.

You don't have to have these accessories in order to make good Polacolor

pictures, but they can make your picture taking easier and more pleasant.

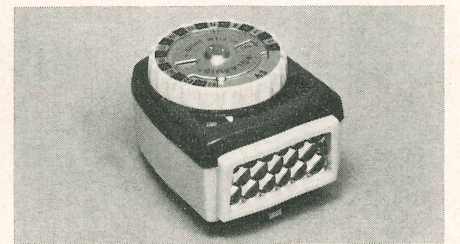
POLAROID FLASHGUN: If you don't shoot flash you're missing half the fun. The #281 gun fits all cameras with a clip-on connection on top of the cam-

era (but don't use it on Model 850 or 900 cameras). Except for the Model 110, all cameras with the flash outlet on the shutter take the #202 flashgun.



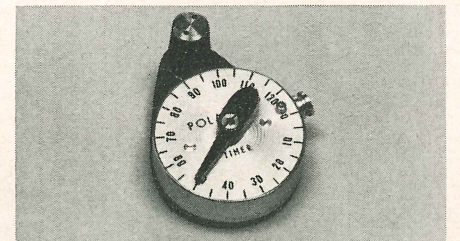
POLAROID EXPOSURE METER #625: The best way to get well exposed color pictures consistently is to use an exposure meter. This ultra-sensitive meter was designed specially for Polaroid Land cameras without electric eyes. It gives

accurate readings in all situations from relatively dim indoor light to brilliant beach or snow scenes. Nothing complicated to set or figure; you read the correct camera settings direct from the dial. Great for black-and-white, too.



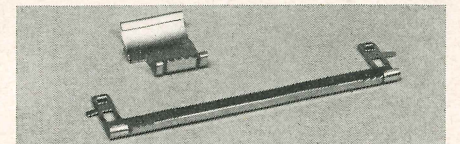
POLAROID DEVELOPMENT TIMER: This handy timer attaches to the tripod socket of your camera. To use it you simply set the timer arm to the recommended development time (for Pola-

color film usually 50-60 seconds), pull the tab to start development and push the timer button. When the timer reaches zero and the buzzing sound stops, you lift out the print.



CUTTER BAR TEETH: Polacolor film is harder to tear than black-and-white film. This little device clips onto the cutter bar, makes it easier to tear off the tab. It's most important for older model

cameras without locking cutter bars (use attachment #274). For all cameras with locking cutter bars (except the J33) use #274L. For the J33 get #273L. The price is 50 cents.



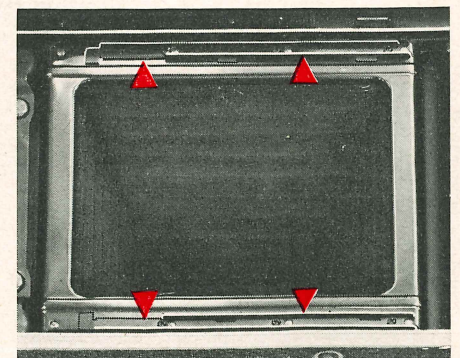
This simple, free alteration prevents trouble, saves film.

Recently manufactured Polaroid Land roll film cameras have an important improvement—guide rails in the back of the camera to assure that the film passes through smoothly and straight when you pull the tab to start development. Installation of the guides helps to prevent a trouble known as "mistracking" which can ruin a film.

Compare your camera with the picture shown here. If your camera does not have these guides we will install

them without charge. Pack your camera carefully and ship it to your nearest authorized repair station (see list, page 29) or ask your dealer to handle the shipping for you. Enclose a note stating "Install tracking guides" and be sure to include your name and address, clearly printed or typed.

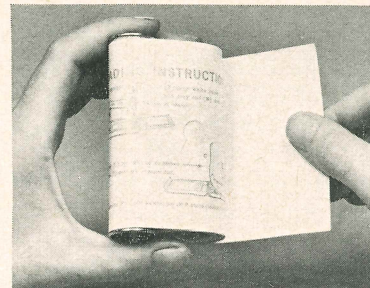
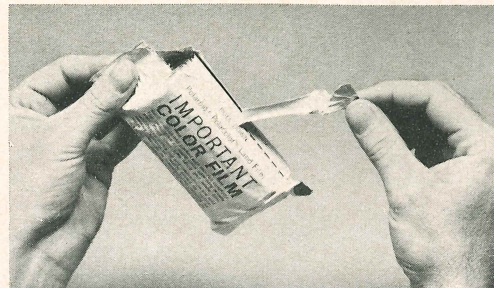
GUIDE RAILS: Simple parts (arrows) help the film to move more smoothly when you pull the tab.



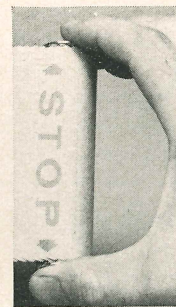
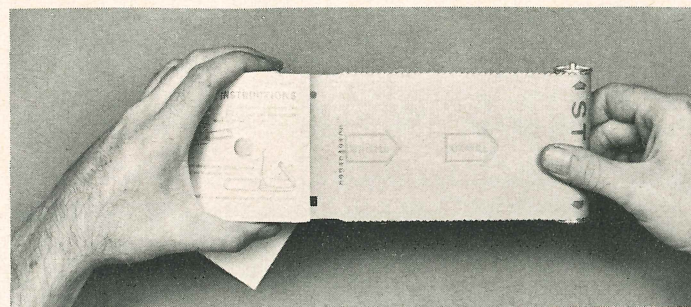
Careless loading can ruin a film. Load it as shown.

If you load Polacolor film carelessly you'll have trouble. However, if you follow these instructions you should have no problems. In the sequence shown, we assume that you've already

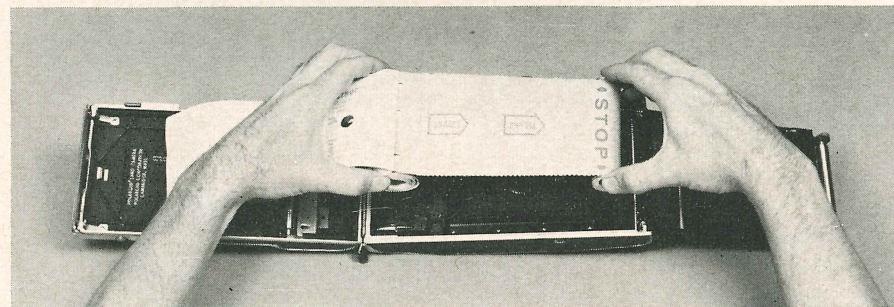
laid the camera flat, opened the outer and inner backs, removed the plastic spool or metal film caps left over from the previous roll of film, and made sure that the rollers are clean.



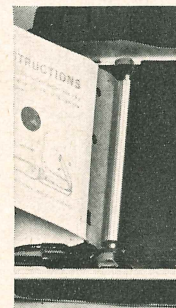
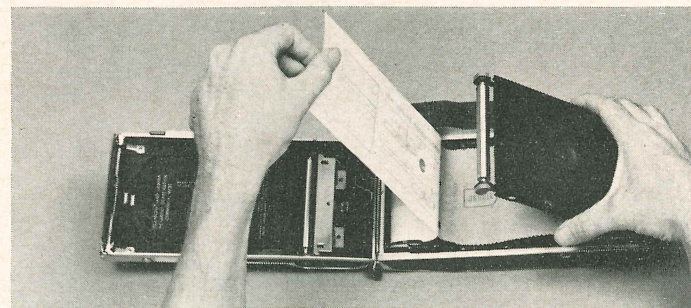
OPEN THE PACKAGE: Hold the foil bag only by the edges when tearing it open. DON'T SQUEEZE the roll; you may crush one of the developer pods and damage one or more pictures. Open the bag wide so you can lift out the roll. Hold the roll by the edges and open the seal holding the paper leader.



UNROLL THE NEGATIVE: Hold the large print roll only by the edges. With your right hand carefully unroll the smaller gray negative roll to, but not beyond the STOP arrows. Don't go even a bit past the STOP marks (close-up).

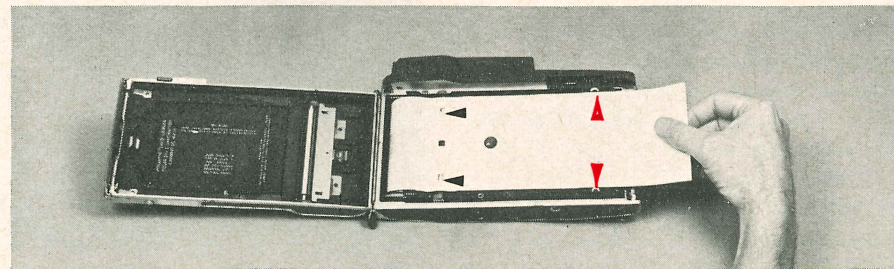


INSERT THE ROLLS: Drop both rolls into place at the same time. When you insert the large print roll in the large film chamber, be careful not to rip open the plastic seal that holds it together. If the roll is a tight fit, press it in lightly, still holding only by the edges. DO NOT PRESS on the middle of the roll. Be sure you don't unwind the gray negative roll any further as you put it into the small film chamber.



LIFT LEADER: Hold the white leader straight up with just enough tension to take out the slack.

CLOSE INNER BACK: Continue to hold the white paper leader straight up and carefully close the inner back of the camera. The steel roller on the inner back should be about 1/2 in. from the end of the gray paper (close-up).



REVERSE LEADER: Carry the white paper leader over to the right side of the camera and lay it between the two small metal guides (red arrows). You should be able to see the steel roller through the holes in the leader (black arrows).

If you can't see the steel roller, stop and find out why not. Most probably

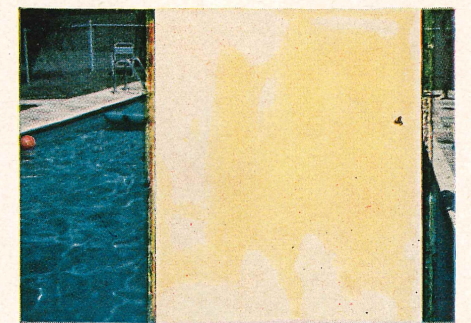
you have unwound the gray negative roll too far and some of the paper has made a fold which is blocking your view of the roller.

To check this, lift up the inner back and look at the gray paper. If the roll has come unwound past the STOP arrows, carefully wind the paper back onto the roll to the STOP marks. Then close the inner back again.

Carefully close and lock the outer back, making sure that both sides latch. Pull the tab straight out of the camera about 15 inches until it hits the stop. Close the cutter bar; tear off the tab.

The pictures at right show the most common result of careless loading. It's known as "misregistration" and there are two main causes for it. The first is that you unrolled the gray film roll past the STOP arrows.

The second is that while you may have unrolled the negative the correct distance before dropping it in the film chamber, in some way you later gave



THESE ARE EXAMPLES OF THE TROUBLE KNOWN AS MISREGISTRATION.

the leader an extra tug and pulled more of the gray paper loose from its roll without realizing it.

An important step in loading is to lift the leader straight up (see photo, opposite page). When you do this be careful that you don't accidentally pull it off to the left somewhat—this could pull some more of the gray paper off its roll. Also, don't pull up strongly on the leader when you raise it—just take the slack out gently.

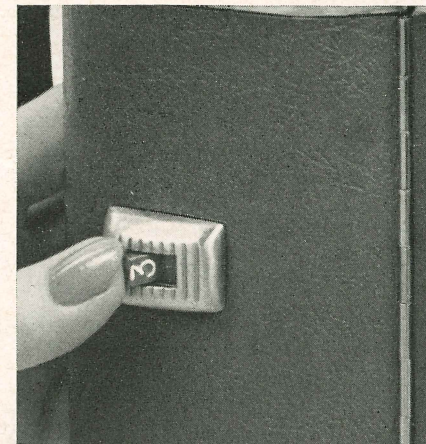
The technical reason for all this is that the negative film is not one continuous piece. Instead, it's made of six sections of light sensitive film joined by pieces of plain paper. If you unroll the negative (gray roll) too far while loading, its sections don't match up with the sections of positive print paper and you get blank areas at either end of the print or even in the middle. The film is then "misregistered" and the roll is ruined. To avoid this, load carefully.

Correct tab pulling is vital. Here's the way to do it right.

Pulling the tab starts the picture developing process. Simple as this step is, if you do it carelessly you can waste one or more pictures. The correct procedure is shown below. When pulling the tab,

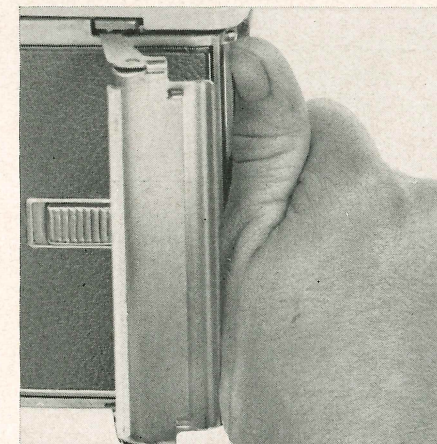
never hesitate or stop in the middle of a pull; this may leave marks running across the print. Don't try to yank the whole roll out of the camera with one big pull—it can be done. Instead, pull

smoothly, swiftly, until the film hits the next stop. Regardless of what you may have seen other people do, hold the camera and pull the tab only in the manner shown below.

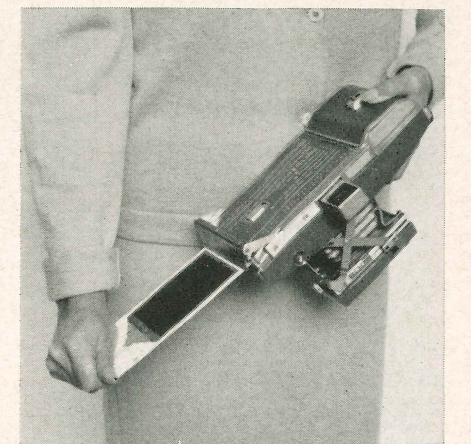


RELEASE THE FILM: Whether it's a switch to flip or a button to push (on older models) operate the film release once and then keep your fingers away from it while pulling the tab. Even a very light touch on either the switch or the button may allow you to pull the film right past the stop, ruining at least two pictures.

On the Model 80 and 80A, push the cutter bar back as far as it will go, then let it come forward again.



GET A GOOD GRIP: Hold the camera in front of you firmly, but not rigidly, with your left hand under the strap and gripping the camera body. Push up the cutter bar and grasp the tab strongly with the flat of your thumb and several fingers. On the J33 and the Model 80 series you may be able to get only one finger under the tab. Don't try any fancy tab pulling grips; the method shown works very well.



PULL THE TAB: Pull it straight out of the camera as shown, swiftly, smoothly, without hesitation, until the film stops. The pull should take less than one second. Don't be violent, but don't dawdle over it either. Start timing development as soon as you have pulled the tab. While waiting, lock the cutter bar (or hold down the non-locking type) and tear off the film. Cutter bar teeth make it easier to do this (page 7).

To get good color, you must **time development** carefully.



DEVELOPED NORMALLY: COLOR IS O.K.



OVERDEVELOPED: BLUISH TINT



UNDERDEVELOPED: PINKISH TINT



GREATLY UNDERDEVELOPED: A MESS

Cold and heat affect development of prints. What to do.

Polacolor film is designed to develop normally when the temperature of the film is between 60° and 90°. *When the film's temperature is below 60° the developing process will not work properly.*

The reason is that the chemicals that develop the picture are part of the film. Cold temperatures slow down the chemical action noticeably. If the camera and film are thoroughly chilled and you develop for the normal 50-60 seconds, the picture may be only partially developed, with weak and muddy looking colors as a result.

You can snap the picture outside on the coldest day, but the camera and film must be warmed up to at least 60° when you develop the picture.

The best remedy for this problem is to keep the camera and film in a warm room (or a well heated automobile) until you're actually ready to take the picture. Then go outside, shoot, and duck back into the warm house or car right away to develop the picture.

If you know you're going to be out in the cold for a long time and must use the camera, keep it and the film in an insulated food bag with a pocket-sized hand warmer that you can get at most sporting goods stores.

If there's no other way to keep the camera warm, carry it under your overcoat, if possible, except during the actual moment of snapping the picture.

Remember, what counts is the tem-

perature of the camera and film at the time you develop the picture, not the nip in the air during the brief moment you're making the exposure.

When it's over 80° the chemical action is speeded up; your prints may be a bit lighter and have softer colors than they would if the temperature was between 60° and 80°. When the temperature hits 90° you'll probably get best results by developing your picture for only 50 seconds.

We recommend that you do not develop pictures when the temperature of film and camera is over 90°. Instead, step indoors where it's cooler and when camera and film have cooled off a bit develop the picture normally.

Don't try to develop Polacolor film when the temperature of camera and film is below 60° or above 90°. The reasons for this are explained below.



Picture situations for you to imitate and improve on.

Starting here are 37 Polacolor pictures, all made with standard Polaroid Land cameras. They show you how to make pictures that are simple, sure-fire successes, warn you about tricky prob-

lems and demonstrate what not to do. Let's look at this fine example. Notice how simple it is. The subject is near; details are big. The print is well filled with large, solid chunks of color; bright

sunlight makes them glow, brings out the contrast with the background. Anyone can make a picture like this. And following are at least a dozen more basic examples for you to use as guides.

For sharp, well exposed Polacolor prints, start with **bright sunshine.**

Whether you're a beginner or an expert you're likely to get more good color pictures on a warm, bright, sunny day than at any other time.

In bright sunshine, colors are richer, more vivid than in dimmer light.

Whether you have an electric eye camera or one for which you set the exposure controls by hand, the bright light on the subject lets you use a fast shutter speed—about 1/100 second—and this cuts down the chance of pictures being blurred.

Finally, because warm weather bright sun is pretty much the same no matter where you are, you don't have to worry about changing light conditions—so long as bright sun is shining on your subject your camera settings should stay about the same: EV 14 or #5 for hand

set cameras; "normal" for electric eyes.

Of course, there are some exceptions. For example, out on a brilliant white beach the sand also reflects light back to your subject. There the correct setting might be EV 15 or #6.

And if it's an 80°-90°F. day and both camera and film are thoroughly warmed, this makes the film "faster" and more sensitive to light. As a result, prints may come out a bit lighter than they would be if the temperature was 65°.

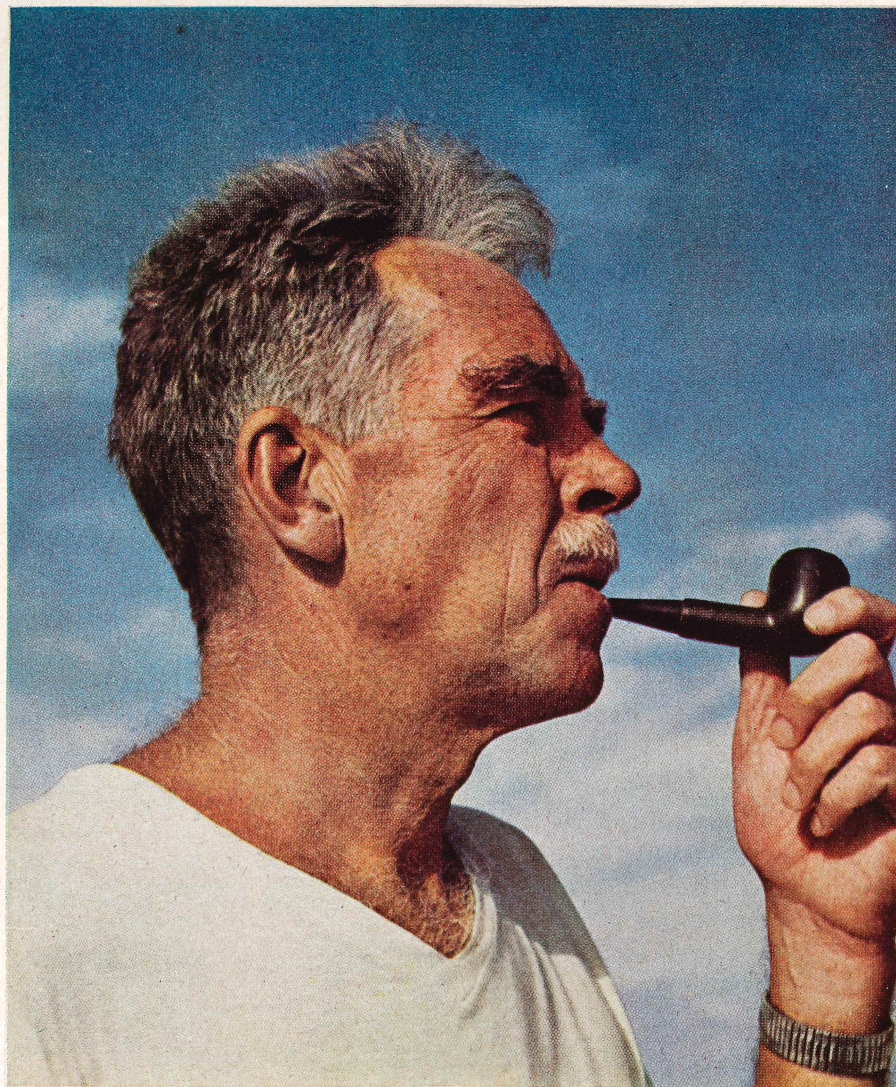
However, these are only minor variations from "perfect" exposures and your prints may be quite acceptable. Cold weather is another story. You'd better read all about that under *Time and Cold and Heat* on page 10.

Whether it's you or an electric eye that is setting the exposure, the impor-

tant point to remember is that *the bright sun must be on your subject*. You could even be indoors, shooting through a window, or from inside a car—if bright sun is shining on your subject it's an EV 14 or #5 setting and the electric eye is "normal."

"Light coming over your shoulder" is a good guide for bright sun pictures and it's particularly important for electric eye cameras. If the light comes from in front of the camera, your subject's face will be shaded, the electric eye will be "fooled" and your prints will come out much too dark.

The main problem with bright sun pictures of people is that if the sun is shining in their eyes they squint and are uncomfortable. We'll show some ways to get around this.



SHOOT A PROFILE; TRY THE SKY: Here the sun is full on the subject, but, because he is looking off at an angle, it is not in his eyes and he can be comfortable and relaxed. A side view is also good if you want to use close-up lenses and come very near for a big image. A deep blue sky makes a grand background for any kind of portrait. To cut out something in the background the camera can be pointed up slightly. Remember that the sky is only bright blue in the direction away from the sun, so be sure to have the light on the subject coming mostly from behind you.

BACKGROUNDS SHOULD CONTRAST:

Before you shoot, look for backgrounds with contrasting color—they'll make your subject stand out more clearly. If your subject is in brightly colored clothes, even a plain gray wall can add strong contrast. But if your subject doesn't have much color, look for a bright background to pep up the scene. And, for best results, the light on the background should be just about as bright as the light on the subject.

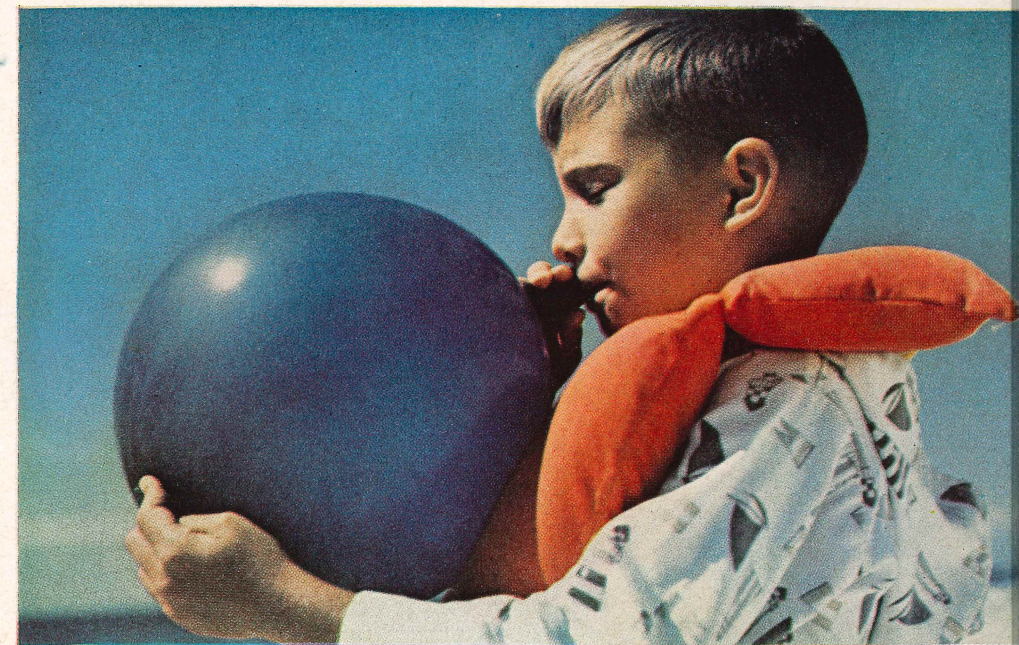
WATER CAN LOOK GREAT IN COLOR:

The cool blue-green of clear, calm water records beautifully on Polacolor film. And you can add all sorts of bright color to the scene—a floating mattress, a gay bathing cap, a colorful swim suit.



TO FILL THE PRINT, ADD A PROP:

Sometimes small subjects are practically lost in the picture. Mostly this happens because the photographer stood too far away. The first rule is to come as close as you can—about 3-3½ ft. is the closest focusing distance with Polaroid Land cameras. Even then a child's face won't be very big (unless you move in with a close-up lens). But you can fill the print by adding something colorful and suitable, like this balloon.



SIDELIGHTING ADDS INTEREST:

In the shot of the young sailor the light comes mainly from the side; see how it adds interesting shadows. For this the sun has to be fairly low in the sky, as in the morning or mid-afternoon.

COLD WEATHER CAUSES PROBLEMS:

Note the young lady on skis. It's possible to shoot Polacolor pictures outdoors in cold weather, but don't attempt it until you've read the cold weather instructions on page 10.



If you're careful about exposure, soft light can make great pictures.

Everyone should start making Polaroid color pictures in bright sun, but once you've got that down pat you may want to try other kinds of lighting. Pictures made in the shade, or when the sun is behind a cloud or a haze, can be just as beautiful as those made in bright sun — often, even more beautiful.

The colors look different. They are softer, more pastel than those in bright sun pictures. But if your subject has bright colors to begin with, they'll glow nicely in your prints.

Also, since your subjects are not in the direct sun's rays they're more comfortable, don't have to squint. Shadows are soft and pleasing.

There's only one rub. As soon as you get out of bright sun, it's no longer easy to know just what exposure settings to use. Since the light is dimmer, you can't use EV 14 or #5.

However, some kinds of shade are

pretty consistent. For instance, if the sun's shining brightly in a clear sky and you turn your subject's face away from the sun (page 15), with a setting of EV 12 or #3 your subject's face usually will be well exposed. Much the same is true of the "open shade" lighting shown below. When the sun is bright, the sky is clear, and the subject is out in the open, if you cut off only the direct sun's rays the light from the clear sky usually gives a well exposed subject at EV 12 or #3.

Unfortunately, some of the best picture opportunities come when the light isn't so predictable. *Then we recommend that you don't even try to shoot Polacolor pictures without the help of an accurate exposure meter* (page 15). There's no point in trying to guess exposure on a cloudy day or in unusual light — there's too much of a chance of wasting the film.

But what about electric eye cameras? J66 and J33 cameras are designed to do a good job with Polacolor film only if the subject is in bright sun, or on a bright hazy day. *They're not recommended for color pictures in the shade.*

Model 850 and 900 cameras can make beautiful pictures in the shade BUT you have to use a bit of judgment.

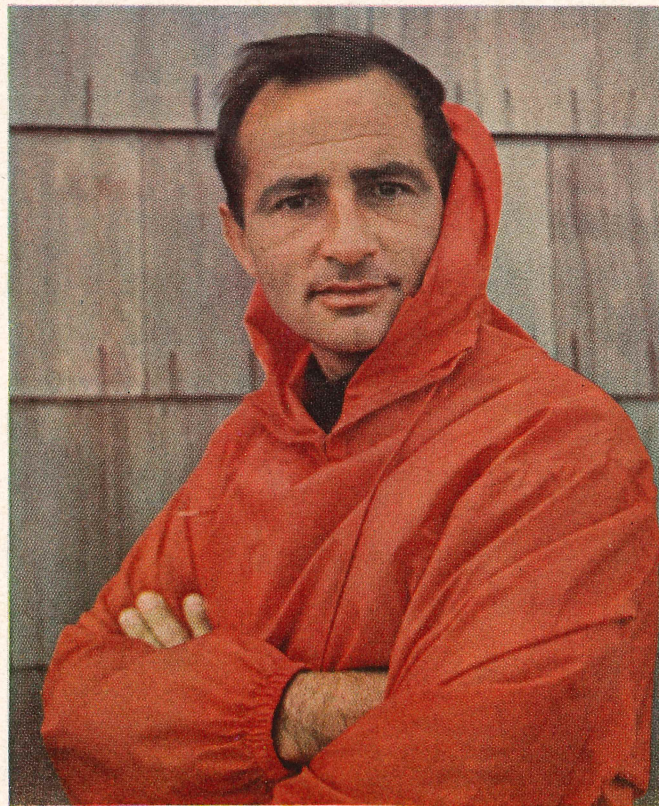
If the light on the subject and the background is about the same, set the scene selector to "normal." However, if the subject is in the shade and the background is in bright sun, the electric eye will be "fooled" and the print will be too dark. So, try to have about the same amount of light on both the subject and the background.

Whatever camera you use, hold it very steady. When the subject isn't in bright sun the shutter moves slowly in order to get a correct exposure and it's easy to shake the camera.

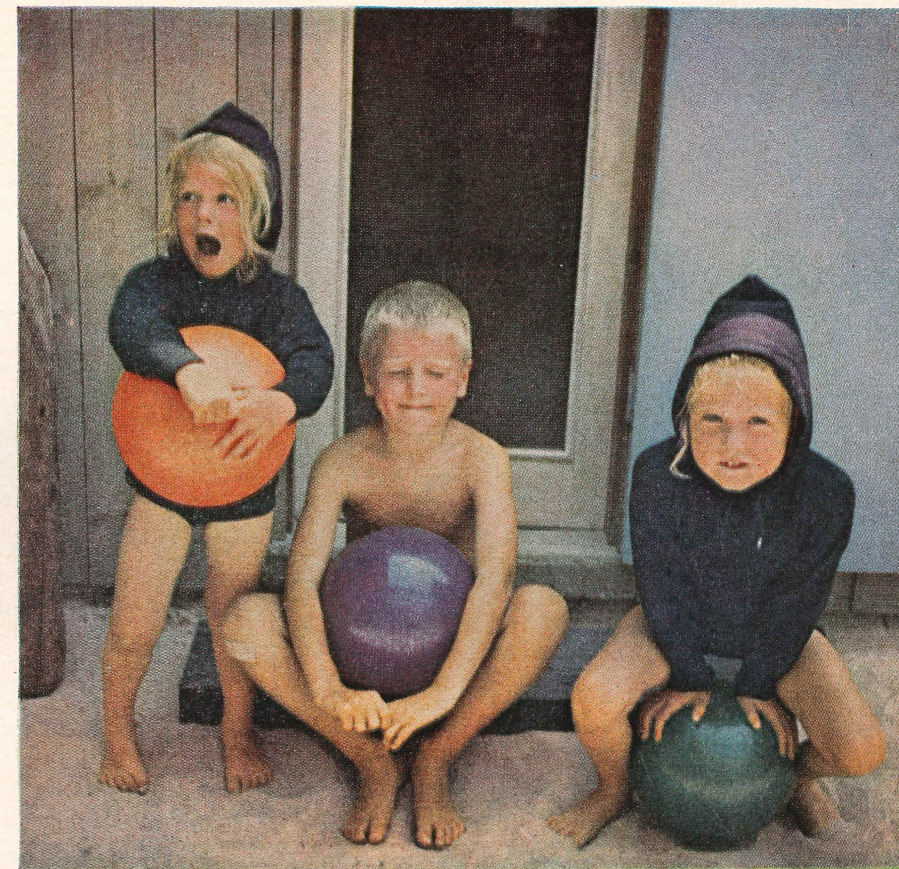
BRIGHT, OPEN SHADE: Look for this next to the side of a house or other object which just blocks off the direct sun. The light comes from the open sky overhead, so don't place your subject

under a porch roof, balcony, or other cover. Or, you can make open shade by having the subject hold something that cuts off direct sun the same way the house does (like a parasol, a big

hat, etc.). Exposure often is EV 12 or #3. Hold very steady, as the shutter has to move slowly in this light. *Not recommended for J66 or J33 cameras, which should be used in brighter light.*



BRIGHT, HAZY DAY: You can make some of your best pictures of people when there's a slight haze or overcast but it's so bright you almost have to squint. The light is even; shadows are soft and pleasing. This is particularly good for pictures of groups because all the people get about the same amount of light no matter which way they happen to be facing. It's often bright enough for EV 13 or #4, sometimes EV 12 or #3. Set electric eye cameras to "normal." Hold steady, as the shutter has to move slowly in this light.



TURNED AWAY FROM THE SUN: No matter how strong and harsh the sun is, you can easily make bright shade by turning your subject's face part way or altogether out of the direct rays. This is good if the sun is overhead. Be careful that the sun doesn't shine right into the lens and fog the film. Exposure usually is EV 12 or #3; in extra brilliant light, as on a beach, it may be EV 13 or #4. *Not recommended for any electric eye cameras.*



How to set and use your exposure meter correctly.

There are two important points to remember with any of the Polaroid exposure meters. First, set the film speed dial correctly, as follows:

Models 625 and 620, set halfway between 50 and 100; PR 22, set at D; PR 23, set at 70; PR23 A, B, set at 100.

The second important point is to bring the meter close to your subject's face, as shown, and measure only the light reflected from the face. Just be careful not to cast a shadow on the

area at which the meter is aimed.

If you stand far back and aim the meter, it "sees" much more than your subject's face. If the face is in the shade but the background is in bright sun, this will "fool" the meter and give you a wrong reading. Or, if the subject's face is in bright sun and behind it is a large open door into a dark room, the meter will "see" the dark background and be affected by it, so the reading will be wrong. *Bring the meter close.*



Scenics, close-ups, still lifes need careful planning.

There's a lot more to making a good scenic picture than just aiming a camera at the countryside and snapping. Maybe that's why many people are disappointed by their attempts. The view that seemed so grand to the eye often doesn't amount to much after it has been compressed onto the size of a Polacolor print.

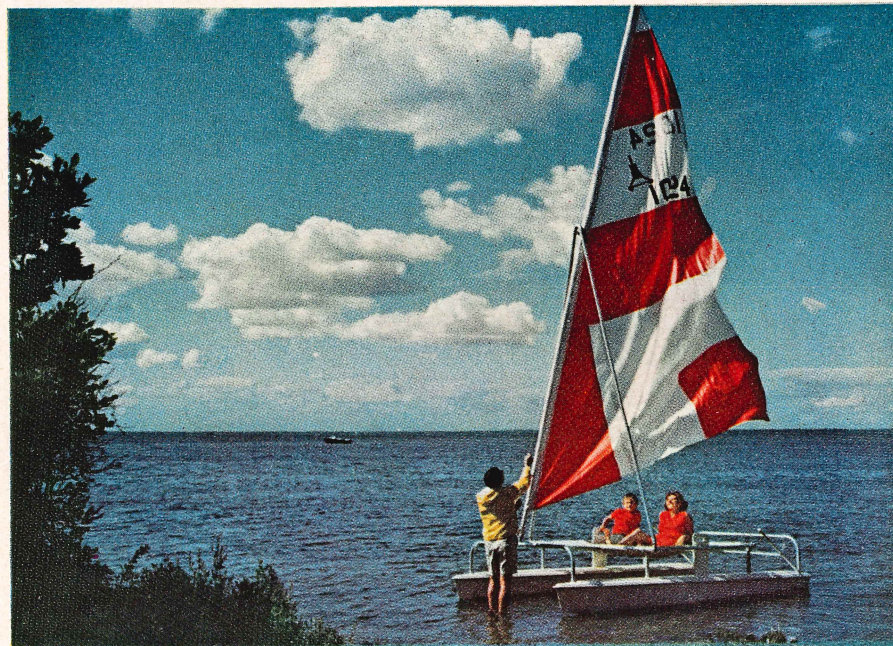
The answer to this problem is to include fewer details but keep them big so they'll still be important in the print.

Concentrate on a part of the landscape, as shown below, instead of trying to show everything at once.

A "still life" is nothing more than a picture of one or more objects that have been arranged by you or by accident so as to make an interesting study in color or shape. It can be as simple as a few weathered shingles, or an elaborate arrangement of fruit, flowers, glassware, etc. The most successful ones usually are lit from the side so as to bring out

the shape, texture, and color. If you keep your eyes open for them you'll be surprised at how many good still life subjects there are everywhere.

Close-ups in color aren't simple to make. You'll need a close-up lens kit (there are no close-up lenses for the J66 and J33) and you ought to use a tripod. If you've never tried close-ups, it's best to start with black-and-white and only try color when you've mastered the technique.



CONTRAST, FOREGROUND INTEREST, BIG DETAILS, MAKE THESE GOOD:

Here are two examples of how very simple, unexciting natural settings can be made into attractive scenic pictures. In the upper one, the clouds and blue sky were the main features, but by themselves wouldn't have meant much. Moving the catamaran in added a center of interest and strong splashes of color. No boat? Even a couple of people in colorful clothes would do. By backing up from the shore a bit the photographer included some heavy bushes to make a frame at one side. This, in the foreground, adds a feeling of depth and distance. A tree, part of a building, etc., can do it, too.

In the lower picture, the landscape would be dull and featureless without the fence. There's little color on the ground or in the sky. Most people would climb over the fence to show more of the hills. Instead, this photographer used the fence to provide foreground interest, large details, strong contrast, and a fine picture.

Remember these ingredients of a good scenic: a center of interest; something strong in the foreground; contrasting colors; large details. Use them and you can make an attractive picture almost anywhere.



UP CLOSE, WORK CAREFULLY: For close-ups, pick subjects that will hold still indefinitely. Pets are unlikely to stay in one place long enough for you

to aim, frame, measure, etc. Use real care in the various picture taking steps; if not, you'll most certainly waste film. Choose subjects with big details, plenty

of color. If they're not out in the bright sun, use an exposure meter (p.15), take your reading from the most important bright part.

Six common daylight picture taking errors.

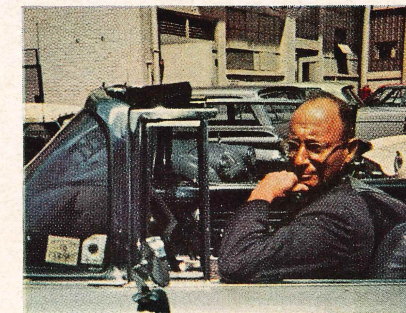
Your print may be well exposed, sharply focused, and perfectly developed, yet still be a total loss as a color

picture. These examples show some causes for such disappointments. Compare these pictures with the ones

on the preceding pages and you'll see how a small amount of thinking can make a big difference.



SCENE AND SUBJECT LACK COLOR: You can't expect good colors if the subject has none. This might have been better in black-and-white.



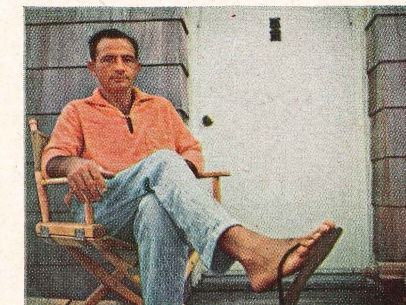
MESSY BACKGROUND: The camera sees more than just the subject. Try to have simple, colorful backgrounds that make your subject stand out.



TOO FAR AWAY: From this distance you can't see much of your subject; even bright clothes are just dots. Come as close as you can.



DIRECT SUN SQUINT: Subjects can't be comfortable with bright sun right in their eyes. Follow the bright sun suggestions on pages 12-13.



DISTORTION: This happens if one part of your subject is much closer than the rest. Arms and legs shouldn't point straight at or away from you.



ELECTRIC EYE PROBLEM: Bright light behind subject "fooled" the electric eye. Always have the light come from behind you or from the side.

Indoor pictures can be great fun if you use **flash** properly.

There's no good reason to stop making Polacolor pictures just because night comes, or you're indoors during the daytime. Good flash pictures are easy to make, if you pay attention to a few simple but important principles.

1. *Use only the flashbulbs and flashguns recommended by Polaroid Corporation* in the instruction sheets that come with the film and in the camera section of this booklet (pages 24-27).

2. Before shooting a flash picture be sure you know quite accurately the distance from the flashgun to your subject. When you have determined that distance, either by measuring or by using the camera's rangefinder and distance scale, look up the correct exposure con-

trol setting for that distance in the flash guide on the film instruction sheet. These are also in the camera section (pages 24-27). Be careful about this. An error of even one or two feet can make an unpleasant difference in the result, particularly when you're close.

3. *Try to keep your subjects near to backgrounds that are light or of medium tone.* For example, within 2-3 ft. of white or light gray walls.

4. *If there's more than one subject in the picture, try to place them all about the same distance from the flashgun.* If some are near and others further away, you won't get them all well exposed. Some may be too light, others too dark.

One of the best ways to get well ex-

posed flash pictures every time is to standardize. *Start out shooting all subjects from a distance of 5 ft.* In average rooms you'll find that the camera setting will be the same for all subjects 5 ft. away. Once you know the right exposure setting, all you need is to get the distance right.

To be sure of having correct flash exposure information with you at all times, cut out the flash guide for your camera from the film instruction sheet and tape it to the camera. Mark the settings that you'll use most.

If you follow these simple procedures you'll amaze your friends (and perhaps yourself) by your ability to get a nice flash picture every time.

DON'T BLIND THEM: Polacolor flash pictures should be made with the flashgun pointing at the subject. This can be uncomfortable for someone 3-4 ft. away who looks at the camera and gets

the flash right in the eye. To avoid this, have nearby subjects look elsewhere than at the flash. If two people are looking at each other or concentrating on a game, as here, you can shoot them in

full- or semi-profile. Or, have your subject looking down at a book or other object. Poses that are comfortable for your subject's eyes will usually give you better pictures than full face shots.



UP CLOSE, MEASURE ACCURATELY:

When you're very close to your subject, it's not easy to get a correctly exposed flash picture. If the flashgun is only 3½ ft. from the subject, even a small movement backwards or forwards can make your picture lighter or darker than it ought to be. So, if you're up close, get the distance accurately and don't move once you've set the camera for that distance. These are two nice portraits, but most photographers will do better to shoot flash from further away (5 ft. is a good distance). And subjects will be more comfortable (both before and after) if they don't look right at the flash.

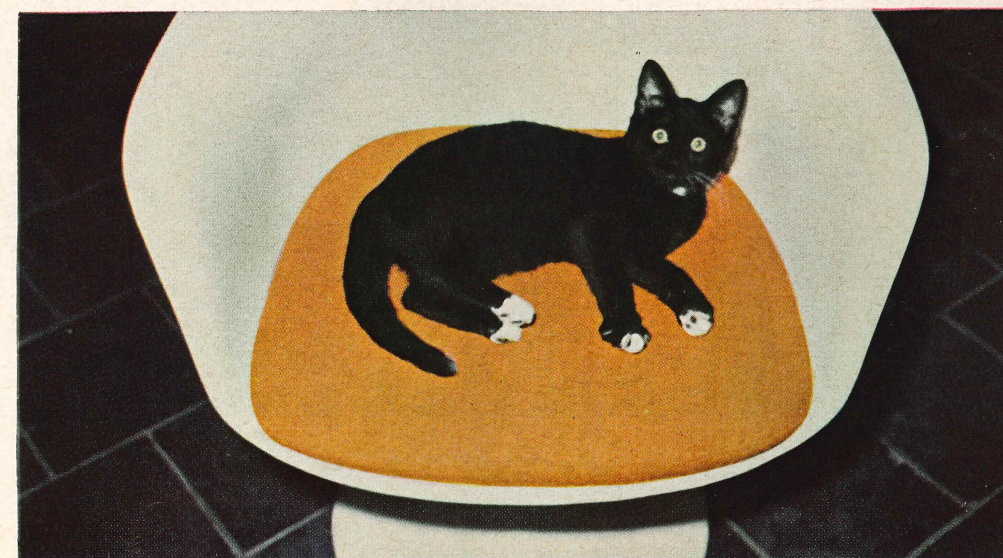
USE THE FLOOR: For small children and pets the floor frequently makes a convenient setting and background. If you have dark floors, just spread out a large bright beach towel, an Indian style blanket, a bed sheet, or something similar that's handy. Because your subjects usually are small, they won't fill the print. Add some props, and if they're colorful (like those shown here) they'll pep up the scene.

IT'S GOOD WITH SPEED LIGHTS: Polacolor film is designed for use with daylight or blue flashbulbs, so it also will give excellent results with a powerful electronic flash unit.

For information about using electronic flash with Polacolor film write to Customer Service, Polaroid Corporation, Cambridge, Mass. 02139.

WATCH THE BACKGROUND: This is certainly an unusual combination of subject and background, but it emphasizes an important point that applies to all flash pictures. Look for simple, nearby backgrounds that contrast with the subject—a light background for a dark haired person; a different color for a blonde head. This separates the subject from the background. If the background is very dark, distant, or jumbled, your subject will be lost against it.

Bright colored cushions, drapes, etc. help to pep up the background. Remember, you're using color film.





PLAN GROUP SHOTS CAREFULLY: Getting an excellent flash shot of a sizable group is not easy. The most important thing is to place everybody about the same distance from the flashgun with a fairly light, reasonably close background. Don't try the old black-and-

white bounce flash favorite of everyone seated around the big dining room table. It's almost impossible to get even lighting on everyone with direct flash. Of course, if you can get them all on one side of the table that's much better, and easier to take.

Try to fill the print by keeping the group compact. Check the flash guide for correct exposure and make sure you're not too far away—7 ft. is the limit for some cameras. And be ready to shoot quickly when some amateur actor starts hamming it up, as happened here.



BOUNCE FLASH, FOR A FEW: Owners of Models 110, 110A, 110B, 120 can try this, but if you have any other model camera it won't work with Polacolor film. You need a white ceiling of average height and a smallish room, with white walls if possible. About the only exposure information we can give is to use the widest lens opening and hope for the best. Bounce flash pictures sometimes tend to pick up colors reflected from the walls of the room.

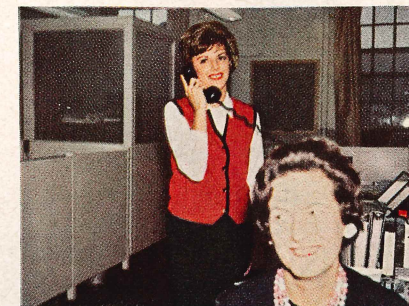
We don't recommend bounce flash for color. It's strictly for brave souls who don't mind wasting some film while experimenting.

Six common **flash** picture taking **errors**.

Even if you're careful about distance, exposure, focus, and developing, your flash pictures can be disappointing. These examples show some reasons why. The secret of successful flash color pictures is a bit of planning.



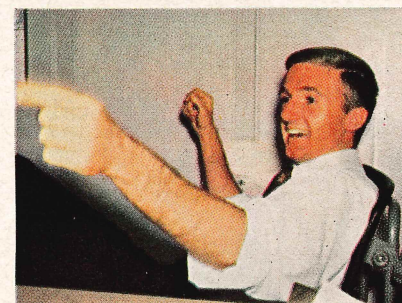
DARK OR DISTANT BACKGROUND: Subject's head blends into the background here. Look for fairly light, simple, nearby backgrounds.



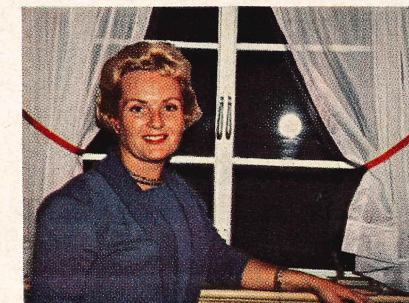
NEAR AND FAR SUBJECTS: One flash can't light them both evenly. Arrange subjects so they're all about the same distance from the camera.



TOO FAR AWAY: Details are too small; colors may not show up well. And maximum flash distance with Models J66 and J33 is about 7 ft.



DISTORTION, UNEVEN LIGHTING: If part of your subject's body is much closer than the rest it will be distorted and lighted unevenly.



SHOOTING INTO WINDOW: The glass reflects a hot spot back into the lens. Avoid aiming the flash at a window, mirror, or other reflecting surface.



WRONG BULB: If you use a clear flashbulb instead of a blue one, pictures will be orange-tinted. *Exception:* use only clear bulbs with J66, J33.

Don't touch the **chemicals**; keep the **rollers** clean.

The Polacolor film developing process uses a caustic jelly which is safely packed inside sealed containers (the pods) within the positive print roll. If, accidentally, you should get some of this jelly on your skin, wipe it off immediately. To avoid an alkali burn, wash the area with plenty of water as soon as possible.

It is particularly important to keep the jelly away from eyes and mouth. Keep the discarded materials (negatives, film tabs, masking paper, etc.) out of the reach of children and animals, for these materials still contain jelly.

In ordinary use, various kinds of dirt may collect in the back of your camera. Most of this is excess developer jelly from the film pods which leaks out dur-

ing the developing process. Usually it shows up first along the edges of the inner back, then spreads around.

If any of this jelly gets on the steel rollers your prints will show evenly spaced pinkish spots like those in the picture at right. If the jelly hasn't hardened you can remove it easily with a lightly water-dampened, clean, lint free cloth (but don't touch the jelly while you're doing this).

If the material has caked hard, scratch it loose with a matchstick, or a bit of folded cardboard (never use anything metallic and don't try it with your fingernail). Then wipe the surface with a slightly damp cloth and dry it. It's a good idea to see if the rollers are clean before loading each roll of film.



NOTE THESE MARKS: They're caused by dirt on the steel rollers.

"Available light" is tricky. You must know the pitfalls.

Polaroid Land camera owners who are accustomed to snapping away in dim light with 3000 speed black-and-white film are likely to want to try the same type of shooting with color. Frankly, we don't recommend it even though beautiful Polacolor pictures can be made this way. There are two main reasons for this. The first is that only a few Polar-

oid Land cameras (Models 110, 110A, 110B, 120) are suitable for this type of picture taking. The second is that it's impossible to give any definite exposure recommendations.

Certainly, you must have an accurate exposure meter, such as the Polaroid #625 meter, and use it as shown on page 15. You should use a tripod or other

firm support, since the exposures are likely to be too long for handholding the camera. Finally, you must be prepared to waste some film if you want to try this kind of "available light" shooting. The results may be well worth some expense and disappointments. But remember, you're experimenting and you're on your own.

WINDOW LIGHT & DEEP SHADE: With the Models 110, 110A, 110B, 120, using slow shutter speeds and the widest lens opening, you can get some beautiful re-

sults. However, you must use an accurate exposure meter and be prepared for some failures. This kind of light usually is quite bluish, and it may cause your

subject's skin to show a blue tint. Be careful not to overdevelop, since that will exaggerate the blue tint in the print, and most subjects won't like it.

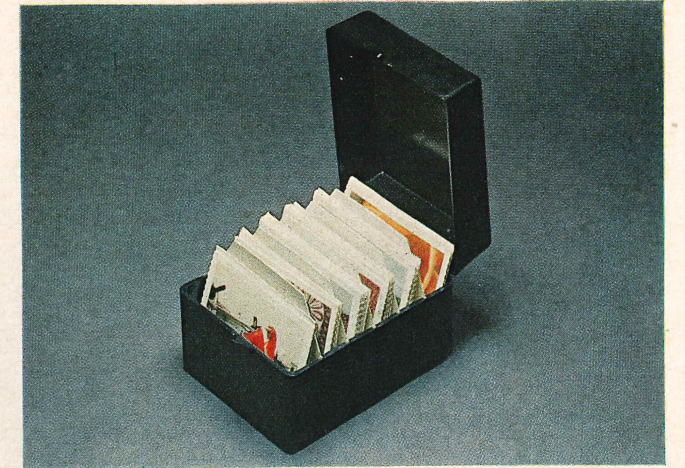
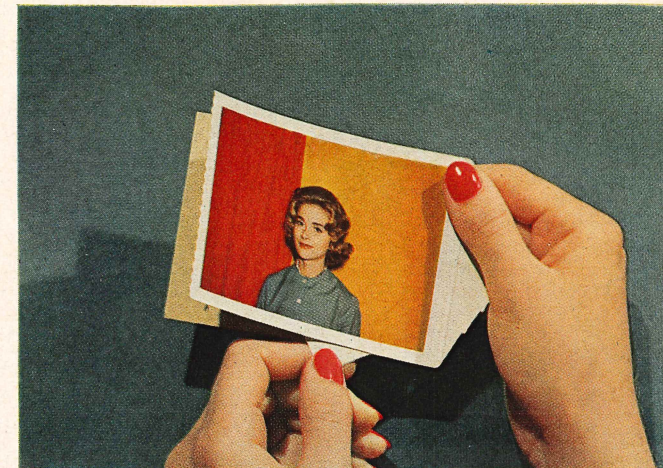


TUNGSTEN & FLUORESCENTS DISTORT COLORS: Polacolor film is designed for use in daylight or with blue flash. Compared to daylight the light from ordinary tungsten house lamps and flood lights is yellowish, or "warm" looking. So, if you use Polacolor film when the subject is lit by tungsten lamps the picture will have an almost orange tint. Fluorescent tubes give various colors of

light, depending on their type. Those most commonly used tend to cause a yellow-green tint. Although exposures by tungsten light (right) may be quite beautiful, those made under fluorescents often are unattractive. Usually you must make a time exposure and that means guessing. For example, the Lincoln Memorial needed 10 seconds at the widest lens opening with a Model 110B.



How to handle, protect, and store your Polacolor prints.



Polacolor prints dry quickly after they are removed from the camera. But, be careful not to let two fresh prints come face to face—they may stick together. *Even when they're fully dried, never store prints face to face.*

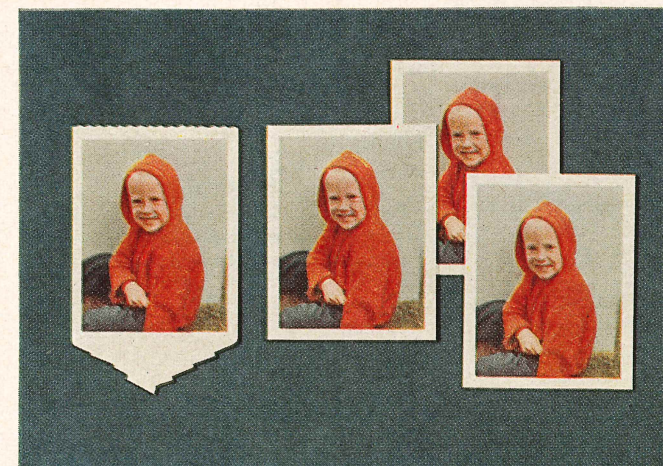
Once the surface of a Polacolor print has dried thoroughly it becomes amazingly tough and scratch resistant. However, don't handle prints roughly.

To avoid fingerprints and smudges,

prints should be picked up only by the edges. Polacolor prints have a tendency to curl. DON'T try to straighten them by drawing them over a straight edge; this may crack the print. Instead, mount your prints on the Polacolor print mounts included in each package of film. They then are quite stiff and lie flat. The mount protects them from being bent. Instructions for using the mounts are on the protective cover.

The neat, inexpensive little box shown above is designed to solve the problem of where and how to store your choice prints. It's the Polaroid Print File #1501. Made of light but strong plastic, it holds a large store of mounted prints and has five dividers for grouping them. With this you can find your favorite print in a jiffy, without searching through drawers, old shoe boxes, etc. Available at your dealer.

You can get excellent color copies, beautiful enlargements.



Polaroid Copy Service has a color division with equipment and materials specially designed to turn out duplicates and fine enlargements of your Polacolor prints. Despite their low cost, the copies are remarkably faithful to the original. They are nice to send out to family and friends. You also can have your color prints copied onto holiday season greeting cards.

You're in for a really grand surprise when you see a big blow-up of a favor-

ite Polacolor print. The 5 x 7 prints have a glossy surface and come in a handsome salon type mount. The 8 x 10 custom enlargements also have a glossy finish and are in a studio type mount that closes to protect the print. They make great gifts and decorations.

A Copy Service envelope, which carries a price list and instructions for ordering, is in each film package.

In order to get a good copy or enlargement you must start with an

original of good technical quality. That is, it must be well exposed, with good color, and the subject must be sharply focused. If the image is blurred, or very dark, or so light that it lacks detail and color, it won't copy or enlarge well. Also, if it's covered with fingerprints, dirt, and scratches these will be copied too, and they will be bigger and more unattractive when the picture is enlarged. So, take special care of prints you intend to have copied or enlarged.

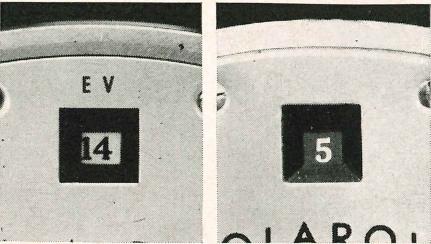
How to make Polacolor pictures with Models 95, 95A, 95B, 150, 160, 700, and 800.

These cameras can make beautiful Polacolor prints in a variety of lighting conditions from bright sun to shade. However, we recommend that you make your first pictures of subjects in bright sun, with the

light on the subject coming from behind you. They also can make excellent flash pictures with the flashguns and bulbs specified below. All models except the 95 have a connection for electronic flash.

If you have a Model 95 camera, do not attempt to load it with Polacolor film until it has been factory modified. See page 6.

SETTINGS FOR DAYLIGHT



SET EXPOSURE: For most pictures of subjects in bright sun use EV 14, or #5 on older model cameras. For an extremely bright scene (such as a beach) you may need EV 15 or #6. Many pictures of subjects in bright open shade can be made at EV 12 or #3. However, for consistently well exposed pictures of subjects not in bright sun use an accurate exposure meter as shown on page 15.



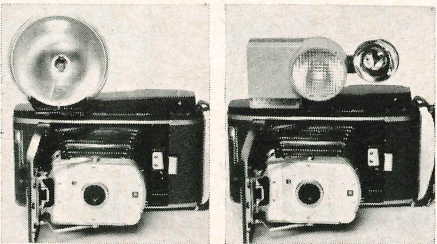
SET DISTANCE: With rangefinder cameras, focus accurately for nearby subjects. With non-rangefinder cameras, estimate distance carefully and set the distance scale. For scenic pictures, set the distance scale to the infinity mark ∞.



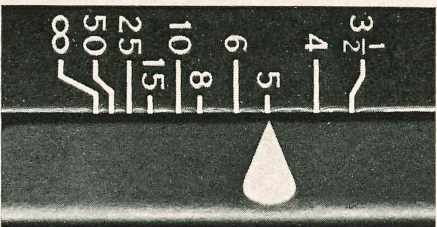
HOLD IT STEADY: Most important for subjects not in bright sun, when the shutter moves slowly. Center your subject in the viewfinder. Gently squeeze the shutter release. Hold steady for a moment after the shutter clicks.

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

SETTINGS FOR FLASH



USE ONLY BLUE BULBS: If you have a Polaroid flashgun use Press 25B or 5B bulbs. With a Polaroid wink-light, attach the Flasher #256 and use AG-1B bulbs. Point the reflector directly at the subject. If you don't have a Polaroid flashgun, or a wink-light and Flasher, buy the Polaroid Flashgun #281 or #202 (page 7 tells you which). Be sure the flashgun or wink-light battery is fresh.



FIND THE DISTANCE: To get a well exposed flash picture you must first know the distance from the flashgun to the subject. With rangefinder cameras, focus on the subject, then look at the distance scale. With non-rangefinder cameras it's easy to measure with a string having knots 5 ft., 7 ft., etc. from one end, which your subject holds, then drops. Set the distance scale.

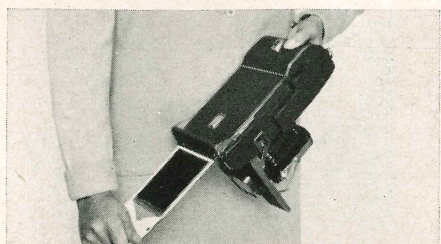
SET EXPOSURE: Check this distance (5 ft. in our example) with the flash guide for the correct EV or exposure number. In this case use EV 14 or #5 with AG-1B bulbs, EV 15 or #6 with Press 25B bulbs.

Flashguns 200, 201, 202, 240, 281 Press 25B (blue) bulb					
Distance	3 1/2'	5'	7'	10'	
EV #	16	15	14	13	
Exposure #	7	6	5	4	
Flasher on wink-light, AG-1B (blue) bulb					
Distance	3 1/2'	5'	7'	10'	
EV #	15	14	13	12	
Exposure #	6	5	4	3	

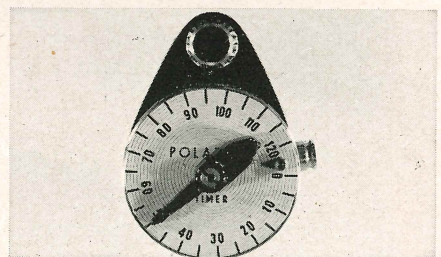
With the Model 95—not 95A or 95B—use only Polaroid flashgun #202, with Press 25B bulbs. Set the camera one number lower than shown in the guide.

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

TO DEVELOP ALL PICTURES

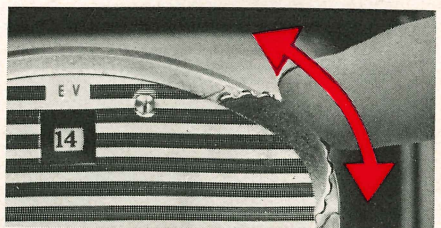


RELEASE THE FILM, PULL THE TAB: After you release the film, keep your fingers away from the switch or button. Pull the tab straight out as shown, rather swiftly, smoothly, without hesitation, until the film hits the stop. This starts development. Immediately begin timing. Lock or hold down the cutter bar and rip off the film. Cutter bar teeth will make this easier (page 7).



TIME IT: Develop for 50–60 seconds in normal temperatures (60°–90°). In colder or hotter weather follow the instructions on page 10.

REMOVE THE PRINT, LET IT HARDEN: Unlike black-and-white pictures, color prints do not have to be coated. The surface of the print will appear nearly dry, but it should not be touched for a few minutes. It will harden to a glossy finish. Do not try to straighten the print by drawing it over the edge of a table or other surface. Attach it to a Polacolor print mount to protect it (page 23).



PICTURE TOO DARK? For the next one of the same subject turn the exposure control to the next lower number.

PICTURE TOO LIGHT? Turn the exposure control to the next higher number.

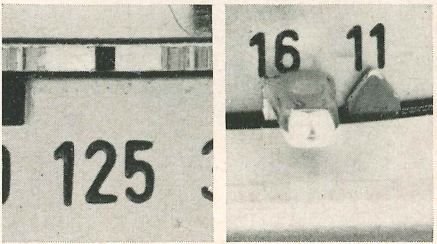
How to make Polacolor pictures with Models 110, 110A, 110B, 120.

These cameras can make beautiful Polacolor prints in a very wide range of lighting conditions from bright sun to shade. However, we recommend that you make your first pictures of subjects in bright sun,

with the light on the subject coming from behind you. They also can make excellent flash pictures with the flashguns and bulbs specified below. All models have a connection for use with electronic flash.

If you have a Model 110 camera, do not attempt to load it with Polacolor film until it has been factory modified. See page 6.

SETTINGS FOR DAYLIGHT

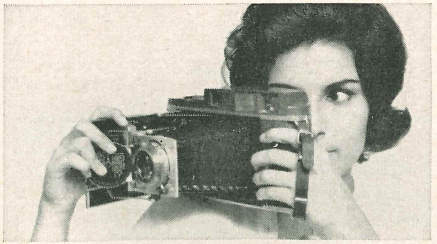


SET SHUTTER, LENS OPENING: For most pictures of subjects in bright sun set the shutter to 1/125 second (1/100 on Model 110) and the lens opening to f/11 or EV 14. For an extremely bright scene (such as a beach) you may need to use f/16 or EV 15. Many pictures of subjects in bright, open shade can be made at 1/60 and f/8, or EV 12. However, for consistently well exposed pictures of subjects not in bright sun use an accurate exposure meter as shown on page 15.

COCK THE SHUTTER: Be sure to push the lever all the way until it clicks twice and stays. If it snaps back from half-cocked position you may lose a picture.



FOCUS CAREFULLY: Use the rangefinder. For scenic pictures set the distance scale to the infinity mark ∞.

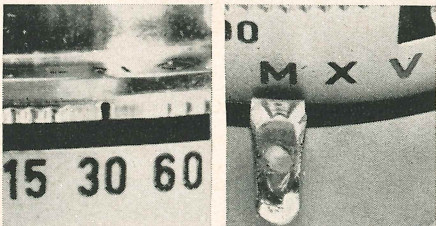


HOLD IT STEADY: Most important for subjects not in bright sun, when the shutter must move slowly. Center your subject in the viewfinder. Gently squeeze the shutter release; hold steady for a moment.

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

SETTINGS FOR FLASH

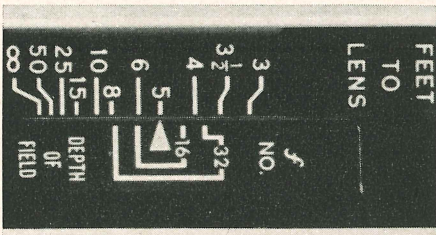
USE ONLY BLUE BULBS: If you have a Polaroid flashgun use Press 25B or 5B bulbs. If you have a wink-light, attach the Flasher #256 and use AG-1B bulbs. Point the reflector directly at the subject. If you don't have a Polaroid flashgun, or a wink-light and Flasher, buy the Polaroid Flashgun #281 (for Model 110A, 110B, 120). Be sure that your flashgun or wink-light has a fresh battery.



SET SHUTTER, FLASH SYNC: Use 1/30 second (1/25 on Model 110). Set the flash sync lever to M.

COCK THE SHUTTER: Note the warning about this in the Daylight column.

FIND THE DISTANCE: To get a well exposed flash picture you must first know the distance from flashgun to subject. Focus on the subject with the rangefinder, then look at the distance scale.

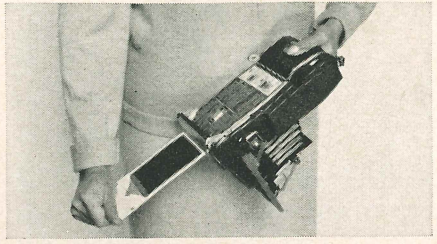


SET EXPOSURE: Check this distance (5 ft. in our example) with the flash guide (below) for the correct f-number to use. In this case (5 ft.) use f/22 for Press 25B bulbs and f/16 for AG-1B bulbs.

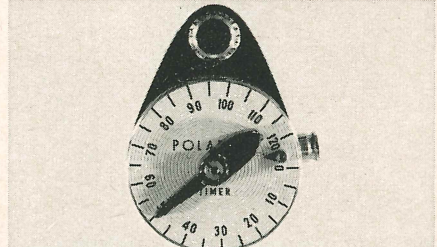
Flasher on wink-light, AG-1B (blue) bulb					
Distance	3 1/2'	5'	8'	12'	
1/30th	f/22	f/16	f/11	f/8	
Flashgun #281, Press 25B (blue) bulb					
Distance	3 1/2'	5'	8'	12'	
1/30th	f/32	f/22	f/16	f/11	

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

TO DEVELOP ALL PICTURES

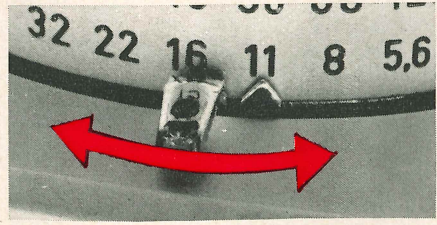


RELEASE THE FILM, PULL THE TAB: After you release the film, keep your fingers away from the switch or button. Pull the tab straight out as shown, rather swiftly, smoothly, without hesitation, until the film hits the stop. This starts development. Immediately begin timing. Lock or hold down the cutter bar and rip off the film. Cutter bar teeth will make this easier (page 7).



TIME IT: Develop for 50–60 seconds in normal temperatures (60°–90°). In colder or hotter weather follow the instructions on page 10.

REMOVE THE PRINT, LET IT HARDEN: Unlike black-and-white pictures, color prints do not have to be coated. The surface of the print will appear nearly dry, but it should not be touched for a few minutes. It will harden to a glossy finish. Do not try to straighten the print by drawing it over the edge of a table or other surface. Attach it to a Polacolor print mount to protect it (page 23).



PICTURE TOO DARK? For the next one of the same subject set the lens opening to the next lower EV or f-number.

PICTURE TOO LIGHT? Set the lens opening to the next higher EV or f-number.

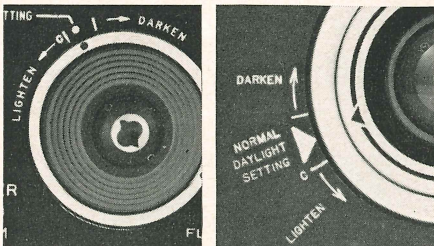
How to make Polacolor pictures with Models J66, J33.

These electric eye cameras can make beautiful Polacolor prints of subjects in bright sun or out in the open on a bright hazy day. We recommend that you make your first pictures of subjects in bright sun,

and that you make all pictures with the light coming from over your shoulder. With the flashgun and bulbs specified below they also can make fine flash pictures. They are the easiest-to-focus models.

You must have three accessories in order to use Polacolor film in your J66 or J33 camera. These are described on page 6.

SETTINGS FOR DAYLIGHT



SET TO NORMAL: This is the correct setting for most pictures of average subjects in bright sun.

IMPORTANT: Each time you change the lighten/darken control setting, you must first turn the control as far as possible towards lighten before turning the control back to the desired setting.

A WORD ABOUT LIGHTING: You'll get best results when the sky is clear and the sun shines brightly. Place yourself so the light comes over your shoulder from behind you and shines directly on the subject. You can also take pictures when there's a thin haze but the sun shines through too brightly to look at it. However, you'll do better in bright sun.



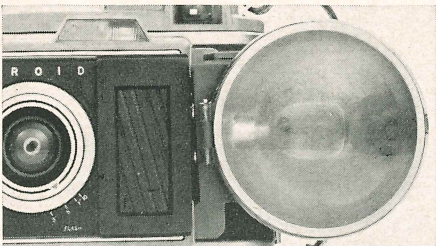
SET THE DISTANCE SCALE: For subjects closer than 7 ft., set it to the "head" symbol. For subjects beyond 7 ft., set it to the "group" symbol.



HOLD IT STEADY: The shutter blade moves much more slowly with color film than it does with black-and-white. Center your subject. Wait 2-3 seconds for the electric eye to adjust. Gently squeeze No. 1, hold still for a moment after the shutter clicks. Then reset No. 2, flip No. 3.

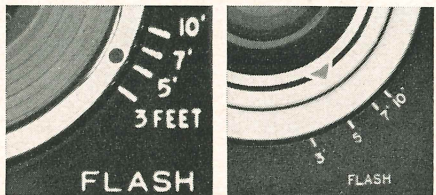
TO DEVELOP THE PICTURE: See instructions in the right-hand column.

SETTINGS FOR FLASH



USE ONLY M-3 CLEAR BULBS IN POLAROID J-5 REFLECTOR: Set this reflector in the camera's flashgun as shown so it points straight ahead. DO NOT use blue bulbs. The reflector has a blue shield. DO NOT attempt to take flash pictures with AG-1B bulbs and the camera's built-in flashgun.

FIND THE DISTANCE: To get well exposed flash pictures you must first know the distance from the flashgun to your subject. Accuracy is important. It's easy to measure accurately with a string having knots 5 ft., 7 ft., etc. from one end which your subject holds, then drops. Don't move away after measuring.



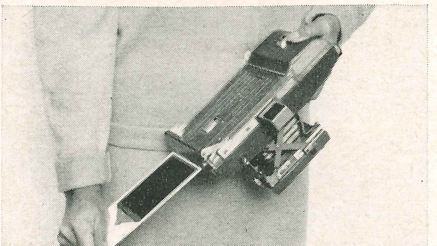
SET EXPOSURE: First turn the L/D control as far as possible towards lighten. Then set the color dot on the L/D control opposite the correct distance mark. Here it's set for 5 ft. This sets the lens opening for correct exposure for a flash picture at that distance.

SET THE DISTANCE SCALE: For subjects closer than 7 ft., set it to the "head" symbol. For subjects beyond 7 ft., set it to the "group" symbol.

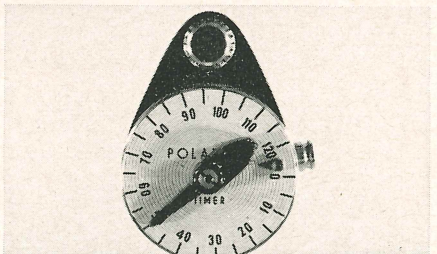
IMPORTANT: Do not try to take pictures if the subject is further from the camera than the maximum distance mark on your adapter. On yellow dot cameras, this is 7 ft. On blue and green dot cameras it's 10 ft. If you try to stretch the distance, the picture will be too dark.

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

TO DEVELOP ALL PICTURES

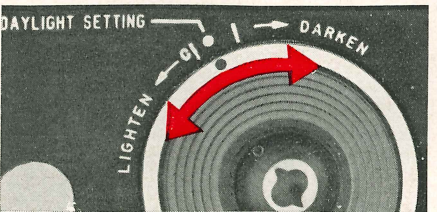


RELEASE THE FILM, PULL THE TAB: After you release the film, keep your fingers away from the switch. Pull the tab straight out as shown, rather swiftly, smoothly, without hesitation, until the film hits the stop. This starts development. Immediately begin timing. Lock the cutter bar and rip off the film. The cutter bar teeth will make it easier to do this (page 7).



TIME IT: Develop for 50-60 seconds in normal temperatures (60°-90°). In colder or hotter weather follow the instructions on page 10.

REMOVE THE PRINT, LET IT HARDEN: Unlike black-and-white pictures, color prints do not have to be coated. The surface of the print will appear nearly dry, but it should not be touched for a few minutes. It will harden to a glossy finish. Do not try to straighten the print by drawing it over the edge of a table or other surface. Attach it to a Polacolor print mount to protect it and to make it easier to store and show (page 23).



PICTURE TOO DARK? For the next one of the same subject turn the lighten/darken control towards lighten.

PICTURE TOO LIGHT? Turn the lighten/darken control towards darken.

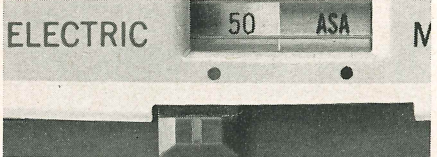
How to make Polacolor pictures with Models 850, 900.

On these electric eye cameras, both shutter speed and lens opening adjust automatically. Therefore, they can make beautiful Polacolor prints in a variety of lighting conditions from bright sun to

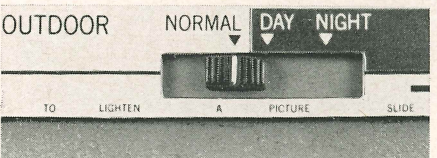
shade. However, we recommend that you make your first pictures of subjects in bright sun, and that you make all daylight pictures with the light coming from over your shoulder. They also can make excellent

flash pictures with the flash equipment and bulbs specified below. Both models have a connection for use with electronic flash.

SETTINGS FOR DAYLIGHT



SET ON ELECTRIC: Turn the film speed dial to 50 as shown.



SET TO NORMAL: This is correct for most pictures of average subjects in bright sun. After you have seen your first picture, you may want to adjust the scene selector to make your next pictures lighter or darker. (The scene selector on your camera may not exactly match the one shown here.)

COCK THE SHUTTER: Do this before setting the distance and aiming.



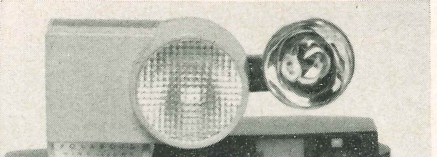
FOCUS CAREFULLY: Use the rangefinder. For scenics, set the distance scale to INF.



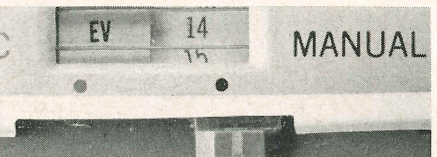
HOLD IT STEADY: The shutter blade moves much more slowly with color film than it does with black-and-white, particularly for subjects not in bright sun. Center your subject in the finder. Wait 2-3 seconds for the electric eye to adjust. Gently squeeze the shutter release, then hold still for a moment after the shutter clicks.

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

SETTINGS FOR FLASH

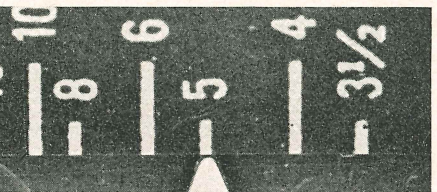


USE ONLY AG-1B BLUE BULBS in the #256 Flasher attached to the wink-light. Point the reflector directly at the subject. Do not attempt to make bounce flash pictures. Be sure you have a fresh battery in your wink-light. Don't use the #281 Polaroid flashgun, or any other flashgun.



SET TO MANUAL: Now you control the exposure by setting EV numbers according to the flash guide as explained below.

COCK THE SHUTTER:



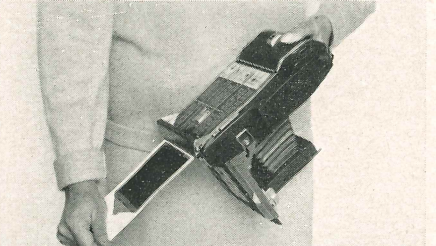
FIND THE DISTANCE: To get a well exposed flash picture you must first know the distance from the flashgun to the subject and then set the correct EV number for that distance according to the flash guide (below). Focus on the subject with the rangefinder, then look at the distance scale. Here the subject is 5 ft. away.

SET EXPOSURE: Check this distance (5 ft. in our example) with the flash guide for the correct EV number. In this case (5 ft.) use EV 13 with AG-1B bulbs.

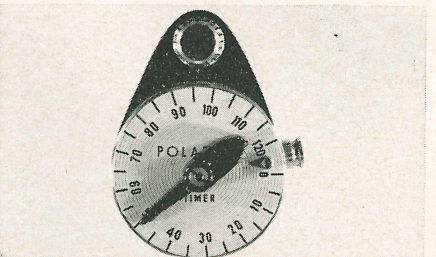
Flasher on wink-light AG-1B (blue) bulb				
Distance	3 1/2'	5'	7'	10'
EV #	14	13	12	11

TO DEVELOP THE PICTURE: See instructions in the right-hand column.

TO DEVELOP ALL PICTURES



RELEASE THE FILM, PULL THE TAB: After you release the film, keep your fingers away from the switch. Pull the tab straight out as shown, rather swiftly, smoothly, without hesitation, until the film hits the stop. This starts development. Immediately begin timing. Lock the cutter bar and rip off the film. Cutter bar teeth will make it easier to do this (page 7).



TIME IT: Develop for 50-60 seconds in normal temperatures (60°-90°). In colder or hotter weather follow the instructions on page 10.

REMOVE THE PRINT, LET IT HARDEN: Unlike black-and-white pictures, color prints do not have to be coated. The surface of the print will appear nearly dry, but it should not be touched for a few minutes. It will harden to a glossy finish. Do not try to straighten the print by drawing it over the edge of a table or other surface. Attach it to a Polacolor print mount to protect it and to make it easier to store and show (page 23).

DAYLIGHT PICTURE TOO DARK? For the next one of the same subject, move the scene selector towards lighten.

DAYLIGHT PICTURE TOO LIGHT? Move the scene selector towards darken.

FLASH PICTURE TOO DARK? For the next one of the same subject turn to the next lower EV number.

FLASH PICTURE TOO LIGHT? Turn to the next higher EV number.

A guide to **picture troubles** and their cure.

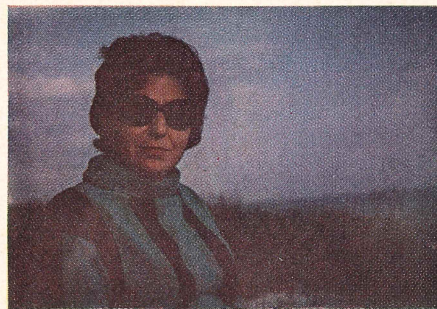
It would be a sad thing indeed if one Polaroid Land camera owner ever encountered all the kinds of picture taking and camera operation troubles

shown on these pages. However, these are samples of the most common types of mechanical problems that arise. If you are faced with one of them, stop

and carefully decide what you must do to correct the trouble and prevent it from happening again. The captions will guide you to the information.



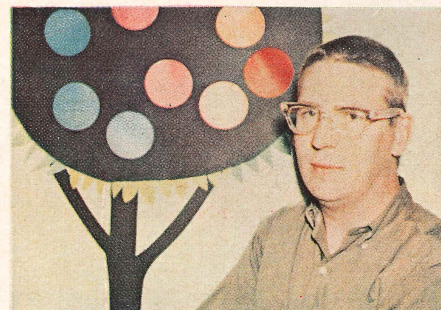
DAYLIGHT PICTURES TOO LIGHT: Overexposed, probably because the camera was set incorrectly. Follow the Daylight setting instructions for your model camera as shown in the camera section (p.24-27).



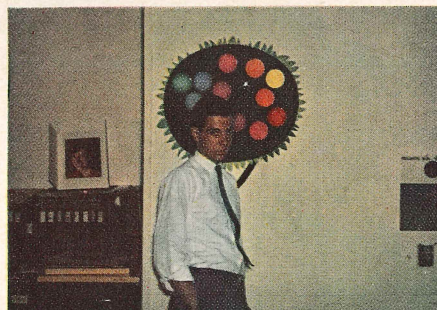
DAYLIGHT PICTURES TOO DARK: Underexposed, probably because the camera was set incorrectly. Follow the Daylight setting instructions for your model camera as shown in the camera section (p.24-27).



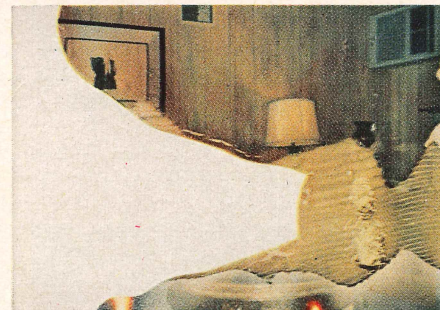
SERIES OF SPOTS: Usually two or three sets of similar pinkish spots. Caused by dried developer or other dirt on the steel rollers. Keep the rollers clean (p.21).



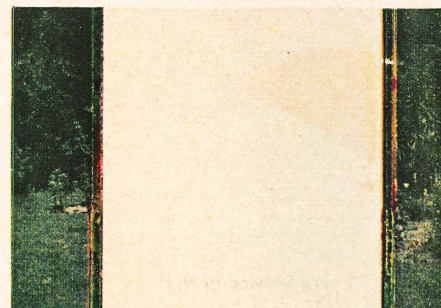
FLASH PICTURE TOO LIGHT: Overexposed, probably because the camera was set incorrectly. Or, you measured the camera-to-subject distance inaccurately. Or, you moved after measuring it correctly. Follow the Flash instructions for your model camera in the camera section (p.24-27).



FLASH PICTURE TOO DARK: Underexposed, probably because the camera was set incorrectly. Or, you measured the camera-to-subject distance inaccurately. Or, you moved after measuring it correctly. Follow the Flash instructions for your model in the camera section (p.24-27).



PARTIAL DEVELOPMENT: If an irregularly shaped section of the picture stays blank, it means that the developer pod for that picture was damaged in some way before you developed the picture. Perhaps you broke the pod during loading. NEVER squeeze the picture roll. Follow the loading instructions on page 8.



BLANK SECTION: If part of the first picture is cut off like this (at either the end or the middle) you loaded the film incorrectly. This defect is called "misregistration" and once it starts the entire roll of film is ruined. To avoid it, follow the loading instructions carefully (p.8).



FUZZY, WITH MOVEMENT: If the entire picture is fuzzy with a pattern of movement, you shook the camera. This is most common with pictures of subjects not in bright sun when the shutter blade must move slowly. Hold the camera steady, squeeze the shutter release gently, and hold still for a moment afterwards.



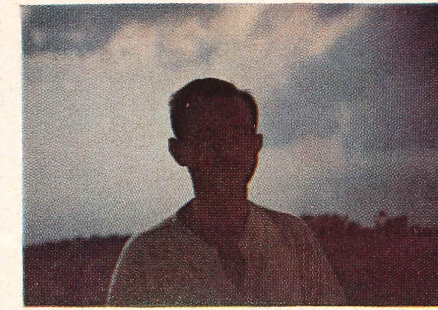
SUBJECT FUZZY, BACKGROUND SHARP: If the subject didn't move but is unsharp, you didn't focus or set the distance accurately. Follow the instructions for your camera in the camera section (p.24-27).



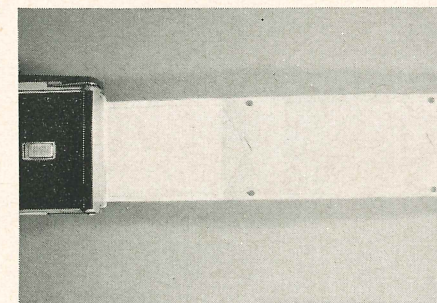
DARK STAINS: Caused by developer chemicals that stick to the print. To avoid this, lift the picture from the back of the camera quickly; don't let it fall back on the negative. Follow development instructions carefully (p.10), especially in cold weather. You can wipe off the stain with a dry tissue if you do it immediately. If you must wait, dampen the tissue lightly with water, wipe the stained area carefully.



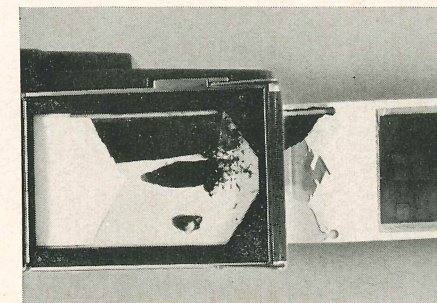
MUDDY PRINT, WEAK COLORS: Probably due to extreme underdevelopment. Perhaps you thought you were using black-and-white film and developed for 10 seconds. Develop for the correct time (p.10).



ELECTRIC EYE CAMERAS ONLY; TOO DARK, AGAINST LIGHT: The light was coming from behind the subject and the electric eye was "fooled" by it, causing a dark, underexposed print. With electric eye cameras, always have the light on the subject coming mainly from behind you.



FILM DIDN'T STOP: Usually caused by touching the film release switch or button while pulling the tab. Once you have released the film, keep your fingers away from the film release switch or button. If it happens when you're not touching the release, the switch or button mechanism may need to be repaired.



PRINT ROLL TORN IN HALF: You pulled the tab too strongly. When the film reached the stop, the positive print roll was torn in half and the print to be developed was dragged part way out of the slot. When this happens, throw away the rest of the film, clean the back of the camera and the rollers. Pull the tab less violently. Follow the tab pulling instructions (p.9).

WHITE, FAINT IMAGE OR NONE: If the borders are white and the picture area has a creamy color, the film developed normally but the negative was greatly overexposed or lightstruck in some way. Maybe you left the back door open while pulling the tab, fogging that exposure. Or, the camera back was opened while loaded with film, fogging part of the film. Or, the camera was accidentally set for a time exposure.

BLACK, FAINT IMAGE OR NONE: Due to extreme underexposure or no exposure. If there's a faint image, either the exposure control, or the lighten/darken control, or the film speed dial (on the Model 850-900) may be set wrong. If it's blank, perhaps you forgot to cock or reset the shutter (on cameras that require it). Follow the instructions in the camera section (p.24-27).

Where to get **information**, help, and **repair service**.

If you want more information about any of the material in this booklet, or about your Polaroid Land camera and film, or other equipment, write to Customer Service, Polaroid Corporation, Cambridge, Mass. 02139.

If your camera or other equipment should be damaged or need any kind of service, you can have it fixed at one of the repair stations listed at right. Perhaps your Polaroid Land camera dealer will help you to ship it. If you do it yourself, be sure to pack the camera firmly in a strong, well stuffed cardboard box, include a full description of the trouble you have been having, and clearly print or typewrite your complete name and address. Insure the parcel and hold onto the receipt until you are certain the camera arrived safely.

Polaroid Corp. (West. Div.)
333 West Mission Drive
San Gabriel, **CALIFORNIA**

R. M. Cudabac
678A Howard Street
San Francisco 5, **CALIFORNIA**

Rocky Mountain Camera Repair
100 E. 20th Avenue
Denver, **COLORADO**

Strauss Photo-Technical Service
930 F Street, N. W.
Washington 4, **D.C.**

Southern Photo-Technical
Service Inc.
24 Second Street, S.
St. Petersburg 1, **FLORIDA**

Polaroid Corp. (Southeast Div.)
1325 Logan Circle, N. W.
Atlanta 25, **GEORGIA**

Polaroid Corp. (Midwest Div.)
2041 N. Janice Avenue
Melrose Park, **ILLINOIS**

International Camera Corp.
844 West Adams Street
Chicago 7, **ILLINOIS**

Camera Service, Inc.
445 South Fifth Street
Louisville 2, **KENTUCKY**

Murphy's Camera Repair
2320-22 Tulane Avenue
New Orleans, **LOUISIANA**

Polaroid Corporation (Factory)
640 Memorial Drive
Cambridge 38, **MASS.**

Northwest Camera Repair Co.
209 Loeb Arcade
Minneapolis, **MINNESOTA**

Newton J. Draper Photographic
Equip. Services
2915 So. Brentwood Blvd.
St. Louis 17, **MISSOURI**

Mack Camera Service
1025 Commerce Avenue
Union, **NEW JERSEY**

Mack Camera Service of N.Y.
20 West 31st Street
New York 1, **NEW YORK**

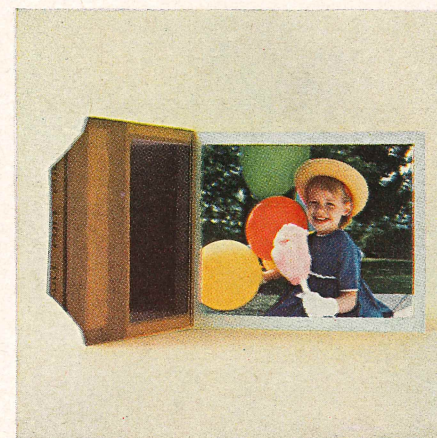
Polaroid Corp. (No. Central Div.)
4640 Manufacturing Road
Cleveland 35, **OHIO**

Polaroid Corp. (Southwest Div.)
8919 Diplomacy Row
Dallas 7, **TEXAS**

Photo-Tronics
223 Westlake N.
Seattle 9, **WASHINGTON**



The new Polaroid Color Pack Camera



Polaroid has recently announced its first new camera model in two years, the Polaroid Color Pack Camera.

Built around an entirely new film system that uses an eight-exposure pack instead of a roll, the camera has many new features. It is smaller and lighter than ever before. The pictures develop outside the camera. The shutter is a radically new electronic light measuring device that has only five basic moving parts.

Is the roll film Land camera now obsolete? By no means. In spite of their differences, both roll film and pack film cameras can do the same thing—make color pictures in 50 seconds and black-and-white in 10.

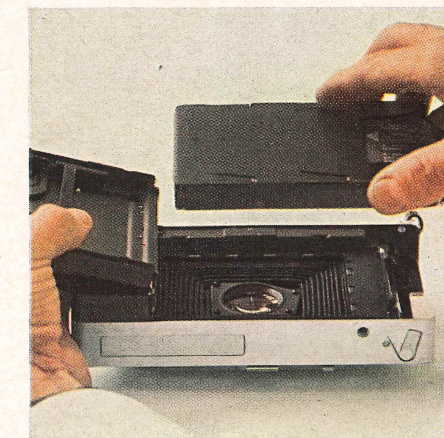
Roll color film was introduced early in 1963 and is now in unlimited supply. All of the earlier model cameras (including the Models 80, 80A and 80B after they have been factory converted) can make superb color pictures. In addition there are six types of black-and-white roll film available including 200 ASA, 3000ASA, 10,000 ASA and three types of instant transparency film. For personal use as well as business and

scientific use, the roll film Land camera still has unequalled versatility.

In keeping with its tradition of continuing research into the photographic processes and development of new and improved photographic products, Polaroid Corporation has made a good many major improvements since the first camera was put on the market. Many owners, however, are still using the original Model 95 that came out in 1948. Others have traded their cameras in to their dealers when a model with new features they liked was introduced. Dealers, recognizing the fact that no Polaroid Land camera is ever obsolete, have always found a ready market for used Land cameras.

A NEW FILM SYSTEM

The new Polaroid Color Pack Camera lays an impressive claim to being the most advanced camera in the world.



Designated the Model 100, this latest expression of the Land photographic process differs in many ways from previous models. The film is contained in a plastic pack which drops right into the back of the camera. This pack (available in both black-and-white and color)

has eight exposures, costs about the same as the familiar roll film. The picture develops outside the camera so the photographer can shoot rapid sequence shots (of a sporting event, for instance) while his first pictures are developing.



This is the smallest, lightest camera Polaroid has ever made, lighter even than many 35mm cameras. It has a trim detachable case and a carrying strap to make it even handier to use.

The most notable advance of all, however, is the new transistorized electronic shutter. Teamed with a sensitive electric eye, it can measure light at any level and set the perfect exposure automatically. It is so fast that it can actually read the burst of a flashbulb and set the exposure *during the flash*. At the other extreme, it can make an automatic time exposure (of a candlelit scene, for example) of several seconds duration. Automatic exposure selection has never been available over such a range or with greater precision.

In spite of its impressive technical innovations the camera is very easy to use. All you have to do is follow the numbers—1, 2, 3, 4—to get your color or black-and-white picture.

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Boston, Mass.
Permit No. 1000

Miss Theresa Downing
29 Conant Drive
Concord, N. H.

800



How to make better

Polacolor Pictures

with
roll film
cameras